

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Division - Watershed Management Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: COUNTRY POND	Lake Area (ha):	103.19
Town: KINGSTON	Maximum depth (m):	9.4
County: Rockingham	Mean depth (m):	2.6
River Basin: Merrimack	Volume (m ³):	3268000
Latitude: 42°53'21" N	Relative depth:	0.7
Longitude: 71°03'35" W	Shore configuration:	1.95
Elevation (ft): 115	Areal water load (m/yr):	16.39
Shore length (m): 7700	Flushing rate (yr ⁻¹):	6.20
Watershed area (ha): 4221.7	P retention coeff.:	0.50
% watershed ponded: 2.2	Lake type:	natural w/dam

<u>BIOLOGICAL:</u>		19 February 2003	13 August 2002
DOM. PHYTOPLANKTON (% TOTAL)	#1	RHIZOLENIA 65%	MICROCYSTIS 30%
	#2	ASTERIONELLA 30%	TABELLARIA 25%
	#3		RHIZOLENIA 15%
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			3.63
DOM. ZOOPLANKTON (% TOTAL)	#1	NAUPLIUS LARVA 42%	KERATELLA 27%
	#2	KERATELLA 29%	POLYARTHRA 13%
	#3		NAUPLIUS LARVA 12%
ROTIFERS/LITER		42	127
MICROCRUSTACEA/LITER		64	81
ZOOPLANKTON ABUNDANCE (#/L)		106	263
VASCULAR PLANT ABUNDANCE			Common/Abun
SECCHI DISK TRANSPARENCY (m)			2.4
BOTTOM DISSOLVED OXYGEN (mg/L)		4.4	0.4
BACTERIA (E. coli, #/100 ml)	#1		9
	#2		4
	#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m):	4.5
Hypolimnion volume (m ³):	178500
Anoxic volume (m ³):	378500

CHEMICAL:

Lake: COUNTRY POND

Town: KINGSTON

	19 February 2003		13 August 2002		
DEPTH (m)	3.0	6.0	1.0	4.0	8.0
pH (units)	6.4	6.3	6.9	6.4	6.4
A.N.C. (Alkalinity)	16.9	16.8	11.1	11.2	39.6
NITRATE NITROGEN	0.11	0.16	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.70	0.60	0.50	0.60	1.20
TOTAL PHOSPHORUS	0.015	0.013	0.010	0.011	0.043
CONDUCTIVITY (μ mhos/cm)	266.0	344.0	220.0	216.0	227.0
APPARENT COLOR (cpu)	39	39	60	65	150
MAGNESIUM			2.44		
CALCIUM			8.7		
SODIUM			26.1		
POTASSIUM			1.93		
CHLORIDE	56	77	52		50
SULFATE	12	14	6		5
TN : TP	54	58	50		28
CALCITE SATURATION INDEX			2.4		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 2002

D.O. S.D. PLANT CHL TOTAL CLASS

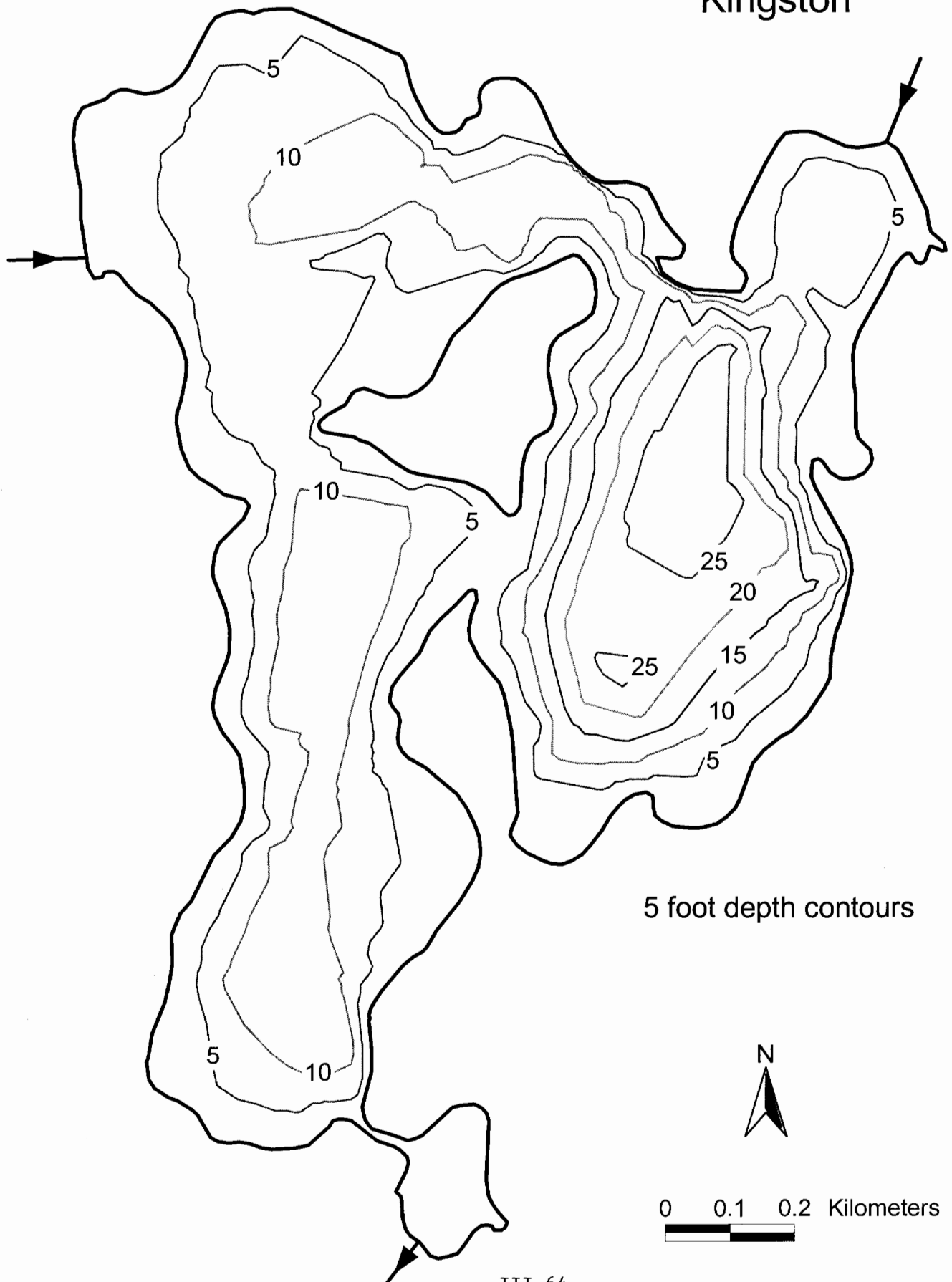
4	3	4	0	11	Meso.
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COMMENTS:

1. Previously surveyed in 1976 and 1985.
2. This is a tea-colored, borderline meso-eutrophic pond. Phosphorus, Kjeldahl nitrogen, color and ANC were elevated in the anoxic bottom waters. Elevated sodium, chloride and conductivity values suggest road salt runoff is reaching the pond.
3. Two town beaches and a marina were present.
4. Although the algal concentration was low, the dominant species during the August sampling was a blue-green alga.

Country Pond

Kingston

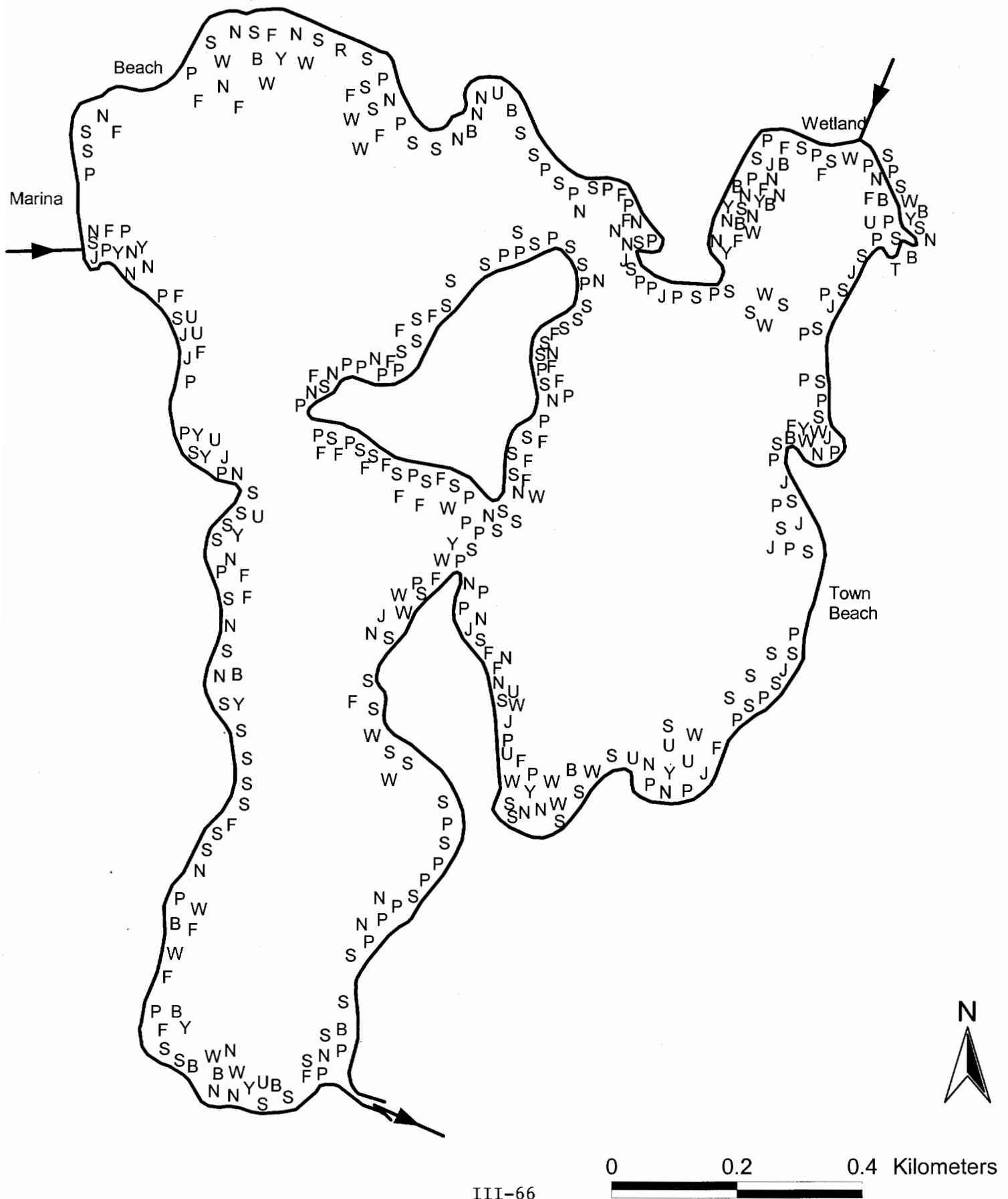


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Country Pond

Kingston



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